Metric and scalar invariance in multi group factor analysis: Traditional approach and Bayesian approach.

Evaluations of Metric and Scalar measure invariance testing has become a central topic in cross cultural research to establish equal meaning of constructs and comparison of means over different cultures/countries (Davidov/Schmidt/Billiet). Presently the chi² difference test and differences in CFI (Chen 2007 have been used for this purpose. MPlus 7 offers a new approach based on Bayesian analysis (Muthen/Aspourov 2012). Using Data from the European Social Survey, we compare the application of conventional approaches and the new features based on Bayesian analysis in terms of flexibility in expressing hypotheses, bias and efficiency and practical handling(time and effort). Finally we try to give a general evaluation based both on the available Monte Carlo simulations and our tests with real data.